

Listing of Claims

1. (Currently Amended) A system for reducing He backside faults when processing a wafer having a process side and a backside opposite the process side, comprising:
 - a cleaning module for cleaning the backside of the wafer so as to remove un-wanted particles therefrom before performing subsequent processing tasks on the process side of the wafer, the cleaning module being configured to only clean the backside of the wafer so as not to effect the process side of the wafer, the cleaning module comprising,
 - a cleaning chamber;
 - an applicator for dispensing a cleaning solution on the back side of the wafer;
 - a brush for scrubbing the backside of the wafer; and
 - a wafer holder for holding the wafer relative to the brush; and
 - a processing module for performing processing tasks on the process side of the wafer ~~after the unwanted particles have been removed from the backside of the wafer,~~ the processing module comprising,
 - a process chamber within which processing takes place; and
 - a chuck for holding the backside of the wafer relative to a top surface of the chuck, the chuck including a heat transfer system for controlling the temperature of the wafer, the heat transfer system being configured for distributing He gas to the backside of the wafer during processing.
 - a transport module configured to remove the cleaned wafer from the cleaning module, to move the cleaned wafer from the cleaning module to the processing module, and to place the cleaned wafer on the chuck inside the process chamber of the processing module without performing any intervening manipulations during said movement.
2. (Cancelled)
3. (Original) The system as recited in claim 2 wherein the chuck is selected from a vacuum chuck, a mechanical chuck or an electrostatic chuck.
4. (Cancelled)
5. (Currently Amended) The system as recited in claim 1 wherein the processing module is a plasma reactor for performing an etching task, the plasma reactor having a process chamber

within which a plasma is formed for the etching task and a chuck for supporting the wafer during the etching task, wherein the process side of the wafer is etched after placing the wafer on the chuck ~~and without performing any intervening processing steps between the etching and cleaning steps.~~

6. (Currently Amended) The system as recited in claim 1 wherein the processing task module is selected from an etching module, a deposition module or a patterning module and wherein the processing task is the next processing task in a sequence of processing steps which include etching, deposition or patterning tasks.
7. (Cancelled)
8. (Currently Amended) A multiple cluster tool, comprising:
 - a transport module for moving a substrate between multiple modules;
 - an integrated processing module operatively coupled to the transport module, the integrated processing module including a chuck and being arranged to perform a processing task on a top side of the substrate; and
 - an integrated cleaning module operatively coupled to the transport module, the integrated cleaning module being arranged to perform cleaning task on a backside of the substrate before loading the wafer into the processing module, the cleaning task including removing unwanted particles from the back side of the substrate without effecting the top side of the substrate, the integrated cleaning module including at least a brush for scrubbing the backside of the wafer, and
 - wherein the transport module is adapted to move[s] the substrate from the integrated cleaning module to the integrated processing module and to place the substrate on the chuck and wherein no intervening processing steps manipulations are performed during said movement between ~~removing the substrate from the cleaning module and introducing the wafer into the~~ processing module.
9. (Currently Amended) The tool as recited in claim 8 wherein the integrated processing module task is ~~an selected from etching module, deposition or patterning~~ and wherein the processing task is the next processing task in a sequence of processing steps which include etching, deposition or patterning tasks.
10. (Cancelled)

11. (Currently Amended) The tool as recited in claim 8 wherein the processing module includes is a plasma reactor for performing an etching task and ~~wherein the cleaning module includes a applicator for applying a cleaning solution to the backside of the wafer, and a brush for scrubbing the backside of the wafer.~~
12. (Currently Amended) The multiple cluster tool as recited in claim 8 wherein the integrated cleaning module further comprises: An apparatus for cleaning the back side of a wafer, comprising:
a cleaning chamber;
an applicator for dispensing a cleaning solution on the back side of the wafer, ~~and a brush for scrubbing the back side of the wafer;~~
a wafer holder arranged to hold the wafer relative to the brush; and
a platen arranged for holding the brush relative to the backside of the wafer.
13. (Currently Amended) The apparatus as recited in claim 12 wherein the wafer holder is configured to hold[s] the wafer against the brush ~~or the platen holds the brush against the wafer.~~
14. (Currently Amended) The apparatus as recited in claim 12 wherein [the] abrasiveness of the brush is configured to remove un-wanted particles while not adversely affecting the backside of the wafer.
15. (Currently Amended) The apparatus as recited in claim 12 wherein the cleaning solution is an alcohol based solution ~~or a water-based solution.~~
16. (Currently Amended) The apparatus as recited in claim 12 wherein the applicator is configured to dispense the cleaning solution ~~is applied onto the brush or to the backside of the wafer.~~
17. (Currently Amended) The apparatus as recited in claim 12 wherein the cleaning module is adapted to move the brush and the wafer ~~move~~ relative to one another to force un-wanted particles off the backside of the wafer.

18. (Currently Amended) The apparatus as recited in claim [12] 17 wherein the cleaning module is configured to hold the wafer ~~is held stationary while the brush is moved or the brush is held stationary while the wafer is moved or both the brush and the wafer are moved together.~~
19. (Currently Amended) The apparatus as recited in claim 12 wherein cleaning module is configured to include ~~position[ing a]~~ the brush against the backside of the wafer, rotate[ing] the brush relative to the wafer, and [flowing] dispense a cleaning solution between the backside of the wafer and the brush.
20. (Currently Amended) The apparatus as recited in claim 12 wherein the brush is dimensioned to cover the entire backside of the wafer ~~or only a portion of the backside of the wafer.~~
21. (Currently Amended) The apparatus as recited in claim 12 wherein the brush is arranged to move in rotatory, ~~linear or orbital~~ motion.
22. (Cancelled)
23. (Currently Amended) A system for reducing He backside faults when processing a wafer having a process side and a backside opposite the process side, comprising:
a cleaning module for cleaning the backside of the wafer so as to remove un-wanted particles therefrom before performing subsequent processing tasks on the process side of the wafer, the cleaning module being configured to perform a dry cleaning process, the cleaning module including a process chamber and a gas system for introducing a gaseous cleaning agent into the process chamber, the gaseous cleaning agent chemically reacting with and vaporizing particles on the backside of the wafer; and
a processing module for performing processing tasks on the process side of the wafer after the un-wanted particles have been removed from the backside of the wafer, the processing module being configured to generate a plasma for performing an etching task, the processing module including a process chamber within which the plasma is generated and a chuck for receiving the backside of the wafer and for supporting the wafer during the etching task; and
a transport module configured to remove the cleaned wafer from the cleaning module, to move the cleaned wafer from the cleaning module to the processing module, and to place the

cleaned wafer on the chuck inside the process chamber of the processing module without performing any intervening manipulations during said movement.

24. (Cancelled)
25. (New) The tool as recited in claim 8 wherein the integrated processing module is a deposition module and wherein the processing task is the next processing task in a sequence of processing steps which include etching, deposition or patterning tasks.
26. (New) The tool as recited in claim 8 wherein the integrated processing module is a patterning module and wherein the processing task is the next processing task in a sequence of processing steps which include etching, deposition or patterning tasks.
27. (New) The apparatus as recited in claim 12 wherein the platen is configured to hold the brush against the wafer.
28. (New) The apparatus as recited in claim 12 wherein the cleaning solution is a water based solution.
29. (New) The apparatus as recited in claim 12 wherein the applicator is configured to dispense the cleaning solution onto the backside of the wafer.
30. (New) The apparatus as recited in claim 17 wherein the brush is held stationary while the wafer is moved or both the brush and the wafer are moved together.
31. (New) The apparatus as recited in claim 12 wherein the brush is dimensioned to cover only a portion of the backside of the wafer.
32. (New) The apparatus as recited in claim 12 wherein the brush is arranged to move in linear motion.
33. (New) The apparatus as recited in claim 12 wherein the brush is arranged to move in orbital motion.